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MASSACHUSETTS PLOUGHMAN
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Correspondence from particular farmers, giving the results of their experience, is solicited. Letters should be addressed with the writer's real name in full, which will be printed or not, at the writer's wish.

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AGRICULTURAL.

Pinch the lima beans back when the vine reaches the top of the pole and the yield will be increased.

SAGE brings a good price for the labor involved. A little of it can be sold in almost any neighborhood.

SWEET corn is generally marketed in barrels which have holes in them to prevent the contents from heating.

BETTER not cultivate field beans when the vines are wet, lest the mud spatter on the pods and cause discoloration and rust.

If the potato bugs are not watched they will make trouble for the tomatoes and egg plants as well as for the potatoe.

For the fall crop of lettuce, seeds should be planted about the first of July and transplanted as soon as large enough. Summer lettuce should be watered to make good plants.

BUCKWHEAT not sown until as late as the middle of July often brings the better crop. It is a very quick growing crop and does not begin to set grain much until the nights are cool.

To get string beans in succession plant every two weeks up to August 1st. Peas can also be grown in the fall, but the crop will not be so large as spring sown peas, and they will mildew if the weather is not fairly cool.

FISH or fish waste may be applied directly to the soil before planting by plowing and harrowing in. A piece of light, moist soil fertilized with fish and seeded down to grass will produce a wonderful crop. If the fish is first composted with loam and muck it will be less offensive to use.

AFTER danger from bugs is passed the pickling cucumbers should be thinned to five plants. Picking begins as soon as the first cucumber is two or three inches in length. If any specimens are overlooked and allowed to get too large, feed them to the hogs. To let them go to seed, will lessen the crop.

MORE pains should be taken to save manure in summer. If cows are tied up at night and absorbents used, much waste is prevented. The barnyard should be cleaned once in a while to prevent washing by surface showers. Insects waste a good deal. If the hogs have access to the manure heap, and are given plenty of green weeds and rubbish, they will increase the size and condition of the heap.

THE late cabbages should all have been set before this time and frequent cultivation should be in order. There is nothing like hoeing to make firm growth. If any of the plants fail to take hold well, hoe in a little phosphate, nitrate of soda, or fine hen manure.

If cabbage lice trouble, sprinkle with slaked lime. Fresh insect powder will kill both lice and cabbage worms. Paris green is unsafe except for small plants.

Value of Drained Soil.

A field of twenty acres which previously yielded only twenty-five bushels of corn per acre, was tile-drained at a cost of \$10 per acre, after which the yield went up to sixty bushels per acre. The extra thirty bushels, at only thirty cents a bushel paid for the entire cost of draining from the first year's crop.

Drainage and Wells.

During hot weather attention should be given to the condition of the sink drain, which will become offensive and dangerous if neglected too long. When the smell is noticed for quite a distance from the drain something is wrong. If the drainage empties on the surface it should fall on sod land, and the place of outlet be changed often. The sewage can be conducted quite a distance beyond the trough by trenches from which it will soak into the sod. Care must be taken not to let it contaminate the well by soaking too long in one place. Besides typhoid fever germs, other germs which cause less serious trouble often find their way into well water through carelessness in regard to the surroundings.

EARLY pens should be cleaned out at once and followed by celery, turnips, barley or any good second crop. If too weedy the ground can be cleaned by driving over with a cultivator which will scrape off the weeds and vines and drag them in small heaps.

For fall feed, a good sowing is three bushels of barley and one of rye to the acre. Sow as early this month as possible. Barley will stand a little frost, and if the land is rich will make a good forage crop this fall. The rye will live over winter and make good feed in the spring.

The ground around the tomatoes should be kept free from weeds until the plants have begun to spread and throw up shoots from the roots. Even if the land is cleaned until then the weeds will come through the plants the last end of the season and give some trouble. Where only a few tomatoes are grown it will pay to put straw under the plants to keep them from the dirt, or tie the plants to stakes.

A Late Crop that Pays.

Celery is not only a profitable crop, but it has the advantage of making most of its growth late in the season, so that if set after most any early vegetable it will make a good yield. July is plenty early enough to transplant for the late celery crop.

A good plan is to set the plants five inches apart in rows three and one-half inches apart. The gardeners around Boston prefer rather heavy, moist land for the main crop of celery. The soil of some of the best celery fields is black and almost mucky; the ground is made very rich with stable manure. The soil is cultivated as for any other crop. Keep the surface soft and fine and kill weeds. In September, or when the

The Forestry Question.

"Whenever the wonderful timber capacity of such sections (New England) is fully appreciated, and when the owners learn how to grow and care for the choicer varieties of timber trees, the forest area will be considered anything but waste land." —Massachusetts Ploughman, July 16.

Never were truer words written than the above. Of all the things I see in the management or mismanagement of lands and neglect of opportunities—God gives opportunities—none surprise me more than the neglect of young forests and of idle lands suitable for the growing of timber. More than two hundred thousand acres of lands lie idle and bare in famous Massachusetts, with its Arnold Arboretum and Bussey Institute.

Instead of growing timber upon these lands she imports largely from Maine, New Hampshire, Vermont, Canada and other places, and lets these acres lie idle.

Since the Hon. Charles Francis Adams has joined in the doleful statements of Doctor Oswald as to the effects of felling too much of the forests in foreign countries, and in earnestly warning our country not to make any such fatal mistake, I would like to ask the former named gentleman to give his great influence (1) to the foresting of the waste lands in his state, to the proper care of timber trees, (2) to the proper care of young forests, such as thinning, pruning and giving preference to the most valuable kinds of trees, and (3) to having the full grown mature trees utilized and their places supplied with young trees instead of permitting the old to occupy the ground a half century or more in rotting down.

In New Hampshire it has been estimated that we cut about one hundred feet board measure per acre annually from our forests, and that at this rate of cutting our timber will soon be exhausted. I believe that I can demonstrate to any man conversant with standing timber and its measurements that from five hundred to one thousand feet board measure, of white pine timber can be yearly grown upon an acre of very poor land. At this slower rate of growth the one million four thousand acres of forest land in Massachusetts would yearly grow more than five hundred million feet of lumber, while the amount yearly cut is not over one hundred and seventy-five million feet.

It is safe to say that the one million four thousand acres of forest in Massachusetts and its two hundred and twenty thousand acres of idle waste land would, properly forested, yearly grow five hundred million feet, board measure of lumber perfectly. I presume that this is some five fold the amount now grown annually.

I believe that there have been more acres of forest felled in America within the last two centuries than in any other division of the earth, and perhaps more acres planted to trees in the United States within the last twenty-five years than in any other country, yet I have failed to find that the felling or setting of these trees have materially affected the rainfall. I am not sure that the freshets have increased in number or volume, or that the streams have been lower in summer on account of this felling of forests in our country. My own impressions are that the more plant growth there is yearly produced in any river valley the less amount of water will be run off in that stream, because a greater amount is used up by the plants.

How much water does it take to grow a cord of wood, seventy-five bushels of corn, three hundred bushels of potatoes or a ton of hay?

Be the facts as they may regarding the effects of forests upon rainfall and the flow of streams, scientific forestry, generally practiced, will certainly furnish a vastly increased amount of timber, and whatever improvement in climatic conditions which depend upon the forests.

J. D. LYMAN.

Exeter, N. H., July 18, 1898.

R. M. Jaynes, a prize buttermaker of Vermont, says: "Sour cream just enough to get the right flavor. I can not tell you how to do it; it takes experience and a lot of it, too."

The Round-Headed Apple-Tree Borer.

The round-headed apple-tree borer is next after the codling moth, the worst enemy to apple culture in America, says a bulletin of the Department of Agriculture.

The first intimation that the grower may have of the presence of this borer in his trees, unless he be forewarned, is in their retarded growth and the sawdust-like castings, consisting of excrementitious matter and gnawings of woody fibre, which the larva extrude from openings into their burrows. This manifestation is usually accompanied by more or less evident discoloration of the bark, and, in early spring, particularly, slight exudations of sap.

The parent of this borer is a beautiful beetle, measuring from three-fourths to nearly an inch in length, the male being perceptibly narrower than the female. The antennae are long, stout, and many-jointed, being somewhat shorter than the body of the insect itself. These organs and the legs are gray, the under surface of the body and the head are silvery white, and the upper surface is light yellowish brown with two longitudinal white stripes extending through the thorax and elytra or wing covers to the tip.

The larva when mature measures from three-fourths to a little over an inch in length. It is fleshy and somewhat grub-like in appearance, cylindrical in form, and light yellow in color. The head is darker, particularly about the mandibles, which are nearly black. The first thoracic segment is large and broad and jointed, being somewhat shorter than the body of the insect itself. These organs and the legs are gray, the under surface of the body and the head are silvery white, and the upper surface is light yellowish brown with two longitudinal white stripes extending through the thorax and elytra or wing covers to the tip.

The pupa is nearly as long as the adult insect, which it resembles in a superficial manner, the head being bent down toward the breast, and the legs and long antennae folded upon the ventral surface. Its color is similar to that of the larva.

This species is native to this country and present in injurious numbers in practically every State of the apple-growing region east of the Rocky Mountains. It is in the older States, particularly New England and New York, where orchards have been long established, that injuries are most pronounced.

FOOD PLANTS AND NATURE OF INFESTATION.

This borer is particularly limited in its food supply to the apple and kindred woody plants. It is most injurious to quince and apple, and somewhat less troublesome to pear. It also infests crab apple and thorns of different species, choke-berry and June-berry, in short practically all except one or two kinds of trees and shrubs belonging to the genera now included in the restricted family of Pomoaceae. The wild plants are as yet not fully known.

This species inhabits more particularly the base of the trunk of trees, often being found below the surface of the earth, especially in young nursery stock. It is to such trees that it is most injurious, as it soon works around the trunk, separating the wood from the bark, interfering with the flow of sap and producing the effect of girdling, a result which is very apt to be produced even when no more than two or three larvae occur upon the same tree. Very frequently four or five larvae dwell together in a single small tree and in a short time injure it entirely beyond recovery.

In older trees larvae occur somewhat higher up the trunk, in exceptional cases at a distance of several feet from the base or even, still more rarely, in the lower limbs; but as a rule they are seldom found except within a foot or two of the base. Trees of all sizes are frequently killed or so weakened that they are unable to mature a full crop of fruit.

The experience of many years shows that injury follows where grasses, weeds

or other rank vegetable growth are permitted to accumulate about the trunks of the trees, since the beetle, like all nocturnal insects, naturally seeks concealment, and the conditions thus afforded are most favorable for its attack on cultivated plants.

Concealed as this insect is during its three years of existence in its preparatory stages it is nevertheless a prey to natural enemies which seek and devour it in its haunts under the bark. Of this number are woodpeckers and hymenopterous parasites.

METHODS OF CONTROL.

After borers have once entered a tree there is no better remedy known than to cut them out with a knife or other sharp instrument. In the treatment of this insect an ounce of prevention is worth several pounds of cure. Cutting the borers out, unless practiced with the greatest care, is apt to result in injury and it is far better to prevent the parent insects from depositing their eggs upon the tree. This is not difficult of accomplishment, as oviposition is practically confined to two months in a single locality, usually during June and July. The best preventives are impenetrable substances placed about the trunk and various washes of a repellent nature.

Cutting out by hand.—Little has been gained in the line of direct remedies for this borer until very recent years. The early writers had nothing better to advise than cutting out the larva, either with a knife or gouge, or killing them by the insertion of a wire into their burrows. These remedies were in use early in the present century and are still the ones most often practiced. It is no uncommon thing to find four or more larva in a single small trunk and the cutting out of all of them, if not practiced with the greatest caution, is apt to result in the girdling of a tree, if, indeed, this has not already been accomplished by the combined attack of the borers themselves. It would seem superfluous to add that it is best to cut the borers out as soon as detected. Their presence may be known by a little experience, some persons, the writer is informed, being so expert in detecting their exact location as to be able to kill them with a knife thrust or by the puncture of an awl or other sharp instrument. The fruit-grower should institute a practice of inspection that the borers may be removed as often as found.

To assist the tree to recuperate after it has been girdled a bridge or two should be made by splitting a piece of apple twig (say, of an inch or two in thickness,) cutting it diagonally on the inside, and applying to the surface at the base of the tree. It should then be tied on and grafting wax applied to each end, after which a fertilizer, preferably fresh cow manure, should be applied and the whole banked over with earth. It is also well to keep the tree watered for a few weeks after treatment whenever this is practicable without great inconvenience.

Mechanical preventives.—This is one of the borers that can readily be controlled by different sorts of mechanical barriers placed about the base of the tree. For this a few thicknesses of newspaper wrapped rather loosely about the trunk and extending about two feet from the base are all that is necessary. This covering should be tied, by preference with cord, which will readily yield or break with the natural expansion of the tree in its growth, and also be tightly fastened at the top and bottom and hilled up with earth so that the beetles can not obtain access to the tree from below. From the top of this covering upward it is best to use some deterrent alkaline or carbolic acid wash. Instead of newspapers, wire gauze or mosquito netting may be used, and should be put in place, so as to loosely encircle the tree, that the beetles may be unable to successfully deposit their eggs between its meshes and the growth of the tree may not be hindered. Both have been successfully employed for a long period of years, and there is abundant testimony to their value. If the netting or paper be put in place early in May, it will not only prevent the beetles from ovipositing during the next two months but will also keep the insects which might be present in the trunk from issuing and reinfest healthy growth.

Clean cultural methods.—Finally, clean culture, the best preventive for insect injury of whatever kind, should not be neglected. The nursery should not be started in new localities where crabs, thorns, June-berry, and other wild food plants of this species grow in great profusion nor in the vicinity of neglected orchards, nor should rank growths of weeds, grasses, bushes, and briars be permitted to accumulate about the trunks of trees. When a tree is seen to be injured beyond recovery it should be taken out and destroyed by burning before the following spring, that the lava which it contains may not have an opportunity to develop and reinfest healthy growth.

POULTRY.

Run-Out Poultry Farms.

In all places where hens have been kept a good many years in large numbers a good deal of the natural food supply has been picked out by successive generations of fowls. The best of the grass and clover has been eaten out, the sharp gravel picked up, and some kinds of worms and insects are quite scarce.

Such failures in the natural supply must be made good artificially or trouble will result. The chances are, too, that old and crowded poultry premises are more or less affected with germs of disease, and they should be cleaned and renovated and the ground planted, one piece at a time.

Why They Need Air.

The summer hen-house shou'd be as open and airy as possible without giving undue advantage to hen thieves and pests.

An ordinary hen-house is always close and stuffy in hot weather, because the hens instead of sweating like human beings or horses show the effects of the heat in breathing much faster than ordinary.

In proportion to their size they use up much more air than a human being, and a house with a poor circulation of air is always uncomfortable and unhealthful for them this season.

Farming Out Eggs.

The practice is becoming very common among noted poultry fanciers, of engaging farmers to raise their fowls, furnishing the eggs and paying either a stated price per grown chick, or paying a good round price for the best birds, and giving the fowls outright to the farmer to be sold for market poultry.

One famous breeder pays his egg farmers ten cents apiece for every egg taken off their farms for his stock, also a good price for the grown chickens.

The profits of this kind of chicken raising are much greater than ordinary. Some of our readers may be able to make arrangements of this kind with the nearest large breeder.

To obtain eggs for raising a farmer must be able to convince the fancier of his reliability and also of his skill in hatching and raising a good per cent of chicks, and giving them quick, vigorous and healthy growth. Those who do well with the stock are retained year after year, while the careless and unsuccessful ones are dropped.

Making a Silo for Poultry.

Farmers and poultrymen are partial to green food in winter and some are interested in ensilage. A subscriber requests information on silos.

We will lay down in brief form a few rules which will include the whole subject in a nutshell, as follows:

1. A silo is a barrel, tank, hogshead, pit, box, or anything that will hold green food. They can be bought ready made of any size.

2. The larger the silo the better, and it must be sufficiently strong to resist great pressure.

3. The more pressure on the contents the more perfectly the air is excluded. If pressed as closely as tobacco in boxes, so much the better.

4. Corn, clover, alfalfa, grass, bean tops, pea vines, or anything may be put in the silo, but all materials must be packed firmly and then weighted.

5. All materials must be as near maturity as possible; that is corn is used when the ears are about beginning to glaze, and clover is cut when in blossom, before the blossoms turn brown. This is because very young plants contain too much water.

6. Everything that goes into the silo must be cut as fine as possible so as to pack well. The material will then be ready for use for poultry in the winter season.

7. The contents will keep for a year or more provided the pressure is sufficient to exclude the air. If the air enters fermentation will result.

8. Cabbage and such watery substances are not suitable for ensilage.

9. A silo should be about 8x8 and eight feet deep, though it may be smaller. A barrel is too small, as the top and sides of the ensilage spoil first.

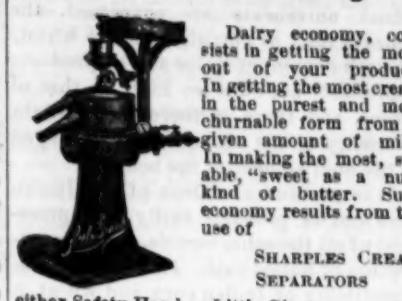
10. To explain how to give pressure suppose that a barrel is used. Have the head of the barrel a trifle smaller than the opening. Pack the contents into the barrel, put on the loose head, and then put heavy stones on the head, the more the better. Keep on filling in the material until the barrel is full, leave the head on and set a heavy stone on it.

11. When using the material always replace the head (or top), and the contents should be so closely packed as to require picking out with some instrument.

12. A silo four feet deep and 4x4 feet will hold more material than will be wanted.

13. It will prove the cheapest food that can be used, will provide a variety, and

True Economy--



Dairy economy, consists in getting the most out of your product. In getting the cream in the purest and most burnable form from a given amount of milk. In making the most, salable, "sweet as a nut" kind of butter. Such economy results from the

SHARPLES CREAM SEPARATORS
either Safety Hand or Little Giant.

P. M. SHARPLES,
West Chester, Pa.

and the material will be succulent and highly relished. We have seen cats eat ensilage made from green corn stalks. They will readily accept the bulky food as an agreeable change from the dry grain.—The Poultry Keeper.

Poultry Notes.

In an egg of 1000 grains, 600 belongs to the white, 300 to the yolk, and 100 to the shell.

Poultry manure, even to the farmer, ought to be worth half the cost of the grain that the fowls get.

If cracked corn is fed to young chicks it should be fine cracked or granulated, not the ordinary kind. It should be given along with plenty of sharp grit.

A little powdered charcoal with the food is good for indigestion. The common symptom of indigestion in fowls is bad breath. Loss of appetite is another sign.

Sometimes fowls will pull feathers in summer if closely confined. Mix powdered aloes with lard and spread around the bare places; they do not like the taste.

Douglas mixture is made with one part sulphur, four parts copperas, adding about quarter of a pound of the two to about a gallon of water. Put a spoonful of this mixture into the water every day when the fowls seem to need a tonic.

This hot weather is hard on young turkey. If there is not too much moisture, the trouble is probably indigestion caused by sour food or the lack of sharp grit. If the birds that die have enlarged livers, the difficulty is surely indigestion.

Persons who have to give medicine to chickens will find it convenient to remember that a teaspoonful holds one fluid dram, a tablespoonful half a fluid ounce, which is equal to about sixty drops of water. A dose for a six weeks chicken is about the same as for a year old child.

Fortunate the man who can give his hens unlimited range in summer. His feed will be light, and his egg supply will not fail, but just as the farmer who wants to make all the milk he can, finds it profitable to feed grain along with his pasture, so the modern poultry keeper, who is in it for business, finds that it pays not to omit the regular rations, and to prepare them with some care even in summer with free range.

Pedigree in Strawberries.

A great many are led astray by the misconstruction of the word "pedigree." What is pedigree? Merely a record, tracing back a line of ancestry, a family descent, an historical record. As applied to strawberries fifty years would cover the time of record, if such a record had been kept, and only lead back to our wild American berry at the head of the line. The writer well remembers the "furor" created by the first decided improvement, i. e., Wilson Albany. There was some little gain in other seedlings at that time, barely enough to encourage experiment, but not enough to justify planting on a large scale.

Foreign varieties were tried and proved unprofitable, only one gained any notoriety, the "Hau Boy," but it was insipid, pale, soft and hollow hearted, although it had size. Even it soon disappeared. What effect these foreigners might have had in pollinating our natives is unknown, but in all fruits from seed, some of those seed have a tendency toward improvement, in order to adapt a species to environments and conditions. Even changing a so-called species and evolution, a survival of the fittest. Cross breeding of varieties is commonly used to accomplish improvement, but this is only developing tendencies. Hybridizing is sometimes resorted to but being against the laws of nature very little is accomplished except as curiosities or monstrosities. Therefore pedigree means a line of ancestry that has shown a constant tendency toward improvement. As all the new varieties can only name their immediate parentage, even under the most careful supervision, pedigree in strawberries amounts to but little. Now, as under the common method of selecting the largest berry for seed, the chances of accidental pollination, renders pedi-

gree, as used in regards to plants, far less.

The law of reproduction is the strongest law of nature in vegetable life, so much so that the parent plant often yields up its own individual life in order to produce and sustain its offspring, particularly so in the strawberry, under certain conditions. A look into its methods reveals two distinct and widely different ways. First, by seed contained in a pulpy receptacle, known as the berry, composed mostly of water, holding in solution the nutrients necessary to form and perfect the seed. One of the wise provisions of nature is the male and female principles, enabling changes of habit suited to conditions. A study of these things leads to improvements of varieties; neglect leads to reverse. A mixture of the two principles shown in plant life by stamens and pistils, enables each to perform its missions, accomplished by the pollen being deposited on the pistils and resulting in seed that contain embryo plants, embodying characteristic traits of both parents. Here is the law of heredity made manifest in a modified form; not as strongly perhaps as in the strawberry. Second, means of reproduction, namely the runner method. A variety originally good, or bad, will always reproduce itself true to its characteristics, by means of the runners, like producing like; except as conditions are detrimental to its powers of assimilation of nutriment, and its resistance to exhaustion. Here comes in the command of infinity, to "dress and keep the garden." "Be fruitful and multiply," is obeyed far more in vegetable life than amongst mankind. Unfavorable conditions such as poverty of land, want of water, (to dissolve nutriment), cold, (rendering the plant dormant), extreme heat, (destroying leaf tissues), cultivation (?) (destroying the natural root system), changing natural methods of growth and climatic conditions; nutriment (manures in an improper state) and ways of applying same, unfavorable environments, etc., all have a powerful effect in producing exhaustion by curtailing the powers of assimilation, thus showing the importance of understanding the details of life processes, and the condition conducive to successful results. To understand the merits of selection, a view of the method of reproduction by plant growth is useful. Start with the incipient layer plant on the runner; it draws its first sustenance from the parent plant by means of the wavy extension called runners, these secure dispersion, as well as a means of transference of the characteristic traits of the seedling, otherwise variety. These traits are transferred by some subtle process savoring of infinite wisdom, and are unknown. All the tendencies are passed over through the runner literally a Phenix rising from its own ashes.

When the "youngster" is strong enough, or, rather the body is ripened enough to start life on its own account the main roots are set forth by the effect of moisture, heat, and "stored-up" vitality. We know that vitality is stored and ripened because a cutting taken at this time is rootless, having but the rudimentary form, yet it will develop itself without farther aid from the parental stock, giving evidence that it contains within its own body all the characteristics and powers of the variety ready to be developed by conditions. Man's province is merely to furnish the conditions, otherwise "dress and keep" intelligently. After sending the main roots downward and as they ripen or become fitted by structural development, hairs or feeding organs are formed much in the same manner as the main roots are, while from the crown more foliage is developed, (note the incipient layer plant, showing a leaf before the body is distinguishable) to perfect the sap by exposing it to the effects of sunlight and heat, and contact with gases of the atmosphere.

As the demand for increased amount of nutriment ensues, the roots extend search of it, by branching out the so-called "fibers," and increasing the number of "hairs;" as the mechanical conditions exist, so will be the ease of root preparation. The roots exhibit an instinct that borders closely on human intelligence. They always turn toward the supply of nutriment, i. e., vegetable and mineral constituents in solution. As water is the "vehicle," they turn toward it invariably; if the supply is deep, the root trend is downward; if shallow and above, the trend is upward, which illustrates the advisability of deep soils, thus rendering the effect of drought abortive. It is evident that if the penetrating points of the working roots are destroyed by any means whatsoever, the well-being of the plant must seriously suffer, because of the inability to perform their functions; only the hairs are absorbents, other portions acting merely as conduits, and

therefore pedigree means a line of ancestry that has shown a constant tendency toward improvement. As all the new varieties can only name their immediate parentage, even under the most careful supervision, pedigree in strawberries amounts to but little. Now, as under the common method of selecting the largest berry for seed, the chances of accidental pollination, renders pedi-

serving as anchors to hold the plant in position.

There seems to be three distinct periods of stages of life in strawberry growth. 1st. Plant growth, when all the energies are directed to building up structural requirements. 2d. The production of seed to adapt the species to conditions and environments. 3d. Reproduction of its own individuality or variety by runners. But the storing-up of vitality is continued from start to finish. Then its own roots die off as well as the foliage, leaving but the body in a state of comparative rest, although a circulation of sap is maintained by means of a couple of leaves from the centre of the crown. When these things are learned in connection with its epicurean habits, the growing of "Big Berries" and "Big Yields" becomes as easy as growing weeds.—Henry Snyder in Strawberry Culturist.

APIARY.

Introducing Unfertile Queens.

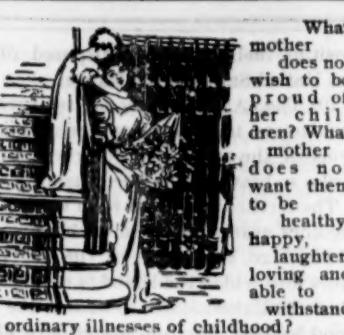
I find that when colonies have been queenless three or more days, they are ready to accept most any kind of a queen. Yet it is always more difficult to introduce a virgin queen than it is a fertile queen, especially if the former queen is more than three days old.

Before I introduce a queen, I find I can be more successful if the bees are first fumigated with tobacco. A large quantity of smoke need not be used. Proceed in the following way to introduce a virgin queen: When the bees are all in for the night, close the entrance with a plantain leaf and introduce the smoke through the feed-hole at the top, and immediately let the queen in. I shake the queen out of the cage into the grass, and before she can fly, catch her and throw her into the hive as above stated, through the same hole the smoke is introduced into. Of course the hive is kept closed till the next morning, when the bees will push the leaf from the entrance, and in the course of a few days the queen will be found laying. All work of this kind should be done after sunset so as to avoid robbing. As most beekeepers understand how to introduce fertile queens, I will not repeat the method here.—Henry Alley in Gleanings.

About Wintering Bees.

Nor did the temperature go above forty-five degrees through the winter. There will be no spring-dwindling here, and I can show as fine a lot of bees as can be found anywhere in Massachusetts.

If the winter problem had not played out, I should expect some of the "hot-bed" bee-men to pitch into me for expressing sentiment like the above. But facts are facts, and the laugh is on my side, as my theory and experiments have proved a complete success.—Henry Alley in Gleanings.



What mother does not wish to be proud of her children? What mother does not want them to be healthy, happy, laughing, loving, and able to withstand the ordinary illnesses of childhood?

Any woman may insure the health of her health in a weekly premium.

Man would have to tell his experiences, and give their names, addresses and photographs in Dr. Pierce's Common Sense Medical Adviser. This book is free. A copy will be sent to any address upon receipt of 21 one-cent stamps to cover cost of mailing.

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Feeding Grain to Cows on Pasture.

Prof. Henry, in his book upon "Feeds and Feeding," relates the result of an experiment made under the direction of the Cornell station to ascertain the value of feeding cows with grain while at pasture.

"Sixteen cows belonging to a New York dairy farmer, which had been lightly fed during the winter, were divided into two lots of eight each. The test began May 23, and one lot was fed four quarts daily of a mixture of two parts cotton-seed meal by weight. The other lot had no grain, and all out in the same pasture.

August 10 the pasture became poor, and both lots were fed with green fodder until Sept. 9, when green millet was substituted for the corn, and this was changed to meadow grass Oct. 1, and followed Oct. 13 with a general quantity of pum. kins. Thus it will be seen that the lot without grain was well supplied with green fodder, much better than the cows of the average farmer.

The test lasted twenty-two weeks, and in that time the first lot had consumed 5,200 pounds more of grain and had given 4,931 pounds more milk than the other lot, or nearly a pound of milk for a pound of grain. They had also gained fifty-three pounds in weight per cow more than did those without grain, or 166 pounds as compared to 113 pounds. The quality of the milk contained about the same.

The next year there were six cows out of each lot remaining in the herd, and they were put in pasture without grain, and a record of their milk kept for six months. The average per cow for those fed grain the previous year was 2,960 pounds per cow for the other lot, a gain of 480 pounds per cow, attributed entirely to the feed of the year previous. Prof. Roberts of the Cornell station said of this test, "It was plainly evident that the grain-fed two-year-olds and three-year-olds developed into better animals than their stable mates which had no grain."

Other experiments made where the cows were in what is called a luxuriant pasture, showed but little gain by grain feeding, for the grain as shown during the test did not repay the cost of the grain fed. Probably a test made upon a poor or scanty pasture would have shown even better results than it did in the test reported. There is also a gain in the improved quality of the manure from grain-fed stock, amounting according to our experiment station, to one-half to one-third the cost of the grain in value."

In hot weather it is of highest utility to supply all grain feed in a light, bulky medium, so that it may be quickly and easily acted upon by the digestive fluids and assimilated facilitated rather than hindered. To this end considerable bran should always be mixed with the heavier and more concentrated feeds of cotton-seed meal, corn meal, etc. It is well to have at least two-thirds of the bulk of the grain feed to consist of bran. Bran is exceedingly light food and an admirable vehicle to convey other food to the stomach and avoid the evils of indigestion.—Practical Dairymen.

Raise Hens

People living just outside cities and towns, and in the country, and near markets, make large profits in the poultry business. No other occupation pays better or is more profitable. It can be successfully carried on by women or boys and girls, provided they have a knowledge of the art of feeding, and of the best and most practical poultry paper.

It teaches how to make money raising poultry and getting it marketable. It tells their readers how to prevent and cure all poultry diseases, and gives a full description of Pierces prescription for all diseases of fowls. It gives a full description of Pierces prescription for all diseases of fowls. It gives a full description of Pierces prescription for all diseases of fowls.

Price, \$1.00 a year, 20 cents for six months.

Sample copy and a 25c book, "A Living Prescription for Fowls," sent for 12c stamp.

L. JOHNSON & CO., BOSTON, MASS.

HOTELS.

Transfer Hotel

JUST OPENED.

Rooms, Restaurant and Board, at reasonable rates.

157 & 159 E. 42 St., NEW YORK CITY.

CHAS. BECKMANN, Prop.

WHEN IN BOSTON, STOP AT THE

AMERICAN HOUSE

Hanover St., near Scollay Sq.

Harvest of the large hotel is Taken Station, Stevens, Stevens and Stevens, Stevens.

LARGEST ROOMS in the city for the price of \$1.00 per day and upward. Steam heat.

Rooms, etc., in every room in the house.



BOSTON, JULY 23, 1898.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

It is often the leisure time that counts for success.

The farmer of all men has a chance to raise a family to be proud of. His children ought to be a comfort in his old age.

Don't borrow unless you expect to lend. The lender has a moral mortgage on the borrower and will expect to take it out in favors.

To put a mortgage on the farm is something like taking the calf into the kitchen; it is likely to grow and drive the whole family out sometime.

A MORTGAGE has a vigorous all the year round appetite and is never troubled with indigestion. It has eaten many a man out of house and home.

WITH good crops of potatoes, hay and vegetables, and a fair yield of apples, the wolf will stay some distance from the door of New England this season.

THERE is a middle course which makes happiness, not only in such matters as eating and drinking and the appetites but in work, economy, pleasure, and all the affairs of life. Be moderate.

NEW ENGLAND dairy farmers are happy with a good crop of hay and fairly good weather to harvest it. If some sort of a fair can be made with the milk contractors, little will be left to be desired.

THE big hay crop this year will tempt too many farmers to sell part of their crop. Selling hay is like drawing money out of the savings bank. The man who sells hay and buys no grain, is skinning his farm.

LET the boy take a load of produce to town and see what he can do with it. That is the way to put business into him. Successful farming in New England is becoming more and more a matter of good selling.

THERE is more in a good garden than the dollars and cents saved. No exercise is so delightful as working on one's own land and taking care of one's own crop, and no fruit or vegetable tastes so good as that of one's own raising.

THIS is the weather when the little weed that could hardly seen a few days ago and might have been destroyed with a rake is already big enough to choke the crop, besides getting ready to ripen a big crop of seeds.

NOT every one can have an expensive mansion house with all the additions and ornaments, but every one can have plenty of shrubs, vines, flowers and trees, which make a cottage more attractive and homelike than an elegant mansion bare of beautiful surroundings.

WHEN a man knows nothing more of farming than he has learned from his father and grandfather, he is in just the condition when he thinks he knows it all. As soon as he gets really waked up by a few new ideas he realizes that he is only crossing the edge of the vast possibilities of farming.

KEEP cool and steady. A man who is always flying off his wits and his temper has a hard time to get along with his family, his friends, and his hired help, and is considerably handicapped in his race for success. It is the steady going fellows that get things done with the least friction, and with the least chance of failure.

NO wonder that the average farmer does not get rich; the average yield of potatoes in the United States is only from sixty to ninety bushels. Many who fall below the average must grow at an actual loss, yet potatoes upon the whole, stand near the head of the staple crops for profit, but the big money is all made by the experts who get from 200 to 500 bushels per acre.

NOTHING that the states have done in recent years has so improved the conditions of rural life as the construction of good roads. Where these have been built the practical effect has been to bring the farms nearer town. Teams can travel more rapidly with heavy loads, and bicycles work to a charm. Every farmer who meets his representative in congress or in state legislature this summer, should impress upon him the fact that the farmers want these improvements.

CATARH CANNOT BE CURED with LOCAL APPLICATIONS, as they can not remove the cause of the disease. Catarh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarh Cure is taken internally, and acts directly on the blood and mucous surfaces. It was prescribed by one of the best physicians in the country, and is a regular prescription. It is composed of the best known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarh. Send for testimonials, free. F. J. CHENEY & CO., Props., Toledo, O. Sold by druggists, price 75¢.

CURRENT TOPICS.

A considerable extension of the weather service is to be made which will include the whole Caribbean Sea, a complete system being planned. Between ten and twelve new stations are to be organized, and reports, forecasts and warnings will be regularly issued from these stations and forwarded to Washington. Many tornadoes originate in this section, and in view of the large extension of commerce expected there in the near future, the information thus gathered will prove valuable, not only to the United States but to all nations.

The Germans are inclined to interfere in Philippine matters, but one move they made was promptly checked by Admiral Dewey. The insurgents obtained control of Subi Bay, which, with the exception of Manila, is the chief harbor in the Philippines. The large island at the entrance, however, they were unable to obtain possession of. In their operations against it, the German warships interfered "in the interests of humanity," according to the Germans. Hearing of this, Admiral Dewey at once sent a cruiser and gunboat, which shelled the island and quickly forced it to surrender. The German warship immediately left, and the Americans are in full control of this important island, thus frustrating both Spanish and German plans. The United States government will take no action on this German interference, preferring to let Admiral Dewey act out his own judgment in this matter. The insurgents and Americans are acting independently of each other, but it is hoped an agreement may be made when the Spaniards are expelled. The Americans are well drilled, and with the reinforcements which have arrived and are already on the way, they will be able to effectively control the Philippines.

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On entering the city of Santiago, the Americans found that the defences were very strong and there would have been a great loss of life had it been necessary to carry it by assault. The Spanish troops, some 25,000 in number, will be transported in neutral vessels to Spain as soon as possible, probably within a month, and the American troops either brought back to this country or sent away from the coast to avoid the yellow fever. Santiago will be garrisoned, it is now planned, by troops considered proof against the fever. The refugees have returned to the city but food supplies are exceedingly limited and there is a great deal of suffering.

The Red Cross agents with their supplies are doing what they can to alleviate the distress and suffering and as the way is now freely opened, plenty of food will be sent from this country, one line of steamers already preparing to open communication with that port.

On Tuesday President McKinley issued a proclamation which provides in general terms for the government of the province of Santiago de Cuba, and is the first document of the kind ever prepared by a president of the United States. The paper is not only an authorization and instruction of Gen. Shafter for the government of the captured territory, but also a proclamation to the people of the territory of the intentions of the United States regarding them and their interests. It marks the formal establishment of a new political power in Cuba and insures to the people of the territory over which the power extends absolute security in the exercise of their private rights and relations as well as security to their persons and property.

President McKinley also has signed a new tariff for Santiago which abolishes the discriminative tariff now in operation there, the rates for different countries at Cuban ports varying. The tariff has for its basis the rates accorded products of Spain and applies them to all countries, not even excepting the United States.

Some hint as to the difficulties which await the United States in adjusting matters in Cuba after the war is over is given by the attitude of the Cubans at the present time. Complaint is made that while they accept freely and gladly the rations provided by the American forces, they are not anxious to assist in the work of the campaign, and the feelings between the two armies, once so cordial, have become somewhat hostile. The Cubans fully expected to be allowed to enter Santiago when it was surrendered and plunder it to their heart's content, assuming control there, but Gen. Shafter will not allow the Cubans to enter the city nor the American soldiers. Although Garcia was invited to the capitulation ceremonies he refused, saying he hated the Spaniards and did not want to be where any of them were.

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The terms of surrender agreed upon by the commissioners were as follows:—

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7. The Spanish general shall be permitted to take the military archives and records with him.
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9. The Spanish forces shall be permitted to march out with all honors of war, de-

positing their arms to be disposed of by the United States in the future.

10. The American commissioners to recommend to their government that the arms of the soldiers be returned to them "who so bravely defended them."

The territory referred to in section two includes nearly one-third of the province of Santiago, the largest of the six provinces into which the island is divided. It gives the United States control of the four good harbors, two on the southern coast, Santiago and Guantanamo, and two on the northern coast not quite so good. The surface of the province is much diversified including high mountains and fertile valleys. The climate is generally agreeable. Yellow fever affects the seaboard during the hot season but more because of neglect of sanitation than for any other reason. Gold, copper, silver, gypsum, slate, jasper, marble, cedar, mahogany and ebony are products of this region.

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others will follow as soon as the full army expedition is ready to make a landing, when the attack will begin simultaneously on land and sea. It is the general understanding that the navy will rely mainly on armored ships for the bombardment of San Juan, as the big battleships and monitors afford the best means of offensive warfare, while their armor belts protect them from such fire as the San Juan batteries can bring to bear. The fortifications there are much like those of Santiago, with a Morro Castle at the entrance of the harbor and a number of lesser fortifications leading up to the city. These, however, are viewed with less awe since an examination of the Morro batteries at Santiago has shown them to be antiquated and capable of little effective resistance.

There will be practically no naval convoys for the troops. The navy department has declared that they are unnecessary, now that there is not a Spanish warship in the West Indies that dare thrust its bow out of port. The expedition does not start from one point, but will be divided among several ports, thus preventing the tremendous congestion encountered at Tampa in the effort to start the big fleet. There will be no effort made to get the ships away together, but the transports will be allowed to find their own way to their destination without concerted movements.

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It has been finally decided that none of the troops who participated in the actual fighting before Santiago shall be employed on the Porto Rico expedition. The men have suffered severely from hardships, the climate and from fevers, and are entitled to a rest. In the second place, it is deemed to be very bad practice to allow the soldiers who have been exposed to yellow fever to be brought in contact with those fresh from the United States. There is also still another reason, a purely military one. Ten thousand Spanish troops are at Holguin, Manzanillo and other points within striking distance of Santiago and might not lose an opportunity to recover the ground lost at Santiago if the place were left insufficiently protected. Therefore Shafter's entire army is to be kept on guard on the high hills in the rear of the town until the men have stamped out the yellow fever. Then they will take a turn at the Spaniards if they can be found and it may be that Shafter's march will end at Havana. He will work as far from his base as possible after his army is thoroughly refreshed, hunting the enemy wherever they are likely to be found.

APPROPRIATION or no appropriation the Massachusetts Cattle Commission is evidently bent upon enforcing the law so far as possible. Of course it is not practicable to continue quarantining cattle for tuberculosis, but the rules which require cattle to be tested before being brought into the state and those which require annual examination of cattle by the representatives of the local boards of health, also the efforts to suppress glanders and other of the less contagious diseases; all such branches of the work can be continued without much expense, and the commissioners seem determined to keep on in these lines, doubtless in hopes that a future legislature may be less hostile or less economical and will give them an appropriation which will enable them to resume in some measure their former plan of campaign. It is evidently desirable, whatever may be thought about the tuberculosis test, that the other branches of the work should be continued and that the state, after spending three quarters of a million dollars on tuberculosis, should be protected from a flood of diseased cattle from the other states. Meanwhile, although no special appropriation has been made, the law that provides for the compensation of the members of the board is in force and they will be able to collect pay for their services. It seems rather unlikely that the next legislature will care to resume a wholesale warfare against tuberculosis, but it is to be hoped that the whole question of regulation of contagious diseases will be so arranged that there will need be no guess work as to the policy to be pursued. Money enough should be appropriated to carry out what laws remain in force.

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positing their arms to be disposed of by the United States in the future.

The Irene incident is said to be but one of many indicating that Germany intends to obstruct and to provoke the United States at every possible opportunity relative to the Philippines.



Washington News.

Fatalities in herds in some sections due to blackleg, has called considerable attention to this disease of cattle and state and governmental measures are now on foot to systematically treat the disease with a view of eradicating or reducing it to a minimum. There seems to be little hope of successfully treating an animal attacked with blackleg, but vaccination, as a preventive is now coming into general use and those who have tested this method speak in high terms of its effectiveness. The disease is caused by a minute bacterial plant, which is too small to be seen with the naked eye, being only one eight hundredth of an inch in length. The disease attacks cattle from six months to three years of age, generally selecting those in prime condition. The disease is communicated by contact, or through spores which lie dormant on the ground where infected or dead animals have been, until an opportunity presents for them to enter the systems of unaffected animals passing over these spots. It is known that these spores may live over from one season to another. It is therefore important to isolate all infected cattle and to keep the balance of the herd away from the infected field, not only at the time but during the succeeding season. As soon as the disease makes its appearance, all unaffected cattle should be removed from the field in which it occurs.

From these data it is seen that the wheat was slightly less digestible than the Indian corn. From a study of the data at the Minnesota Station it may be stated that when corn and wheat are both selling at fifty cents a bushel, the fifty

MARKETS.

BOSTON LIVE STOCK MARKET.

Western steers rule 1-4 and 3-8c higher.—Sheep steady.—Hogs firm.—Calf market steady as last quoted.—Milch cows in moderate state.—Horses steady but quiet market.

Reported for Mass. Ploughman.

Week ending July 20, 1898.

Amount of Stock at Market.

Cattle, Sheep, Hogs, Veal.

This week, 3,246 7,358 115 25,969 1,688
Last week, 4,278 6,330 108 19,772 1,748
Year ago, 4,308 12,571 142 29,175 1,907

Horses, 408.

Total, 3,246 7,358

CATTLE AND SHEEP FROM SEVERAL STATES

Cattle, Sheep, Cattle, Sheep

Maine, 192 New York

Hampshire, 67 Rhode Island

Fernont, 65 Western, 2,627 7,200

Massachusetts, 172 Canada, 80

Total, 3,246 7,358

VEAL CALVES

Prices are first as quoted last week. What

values were offered hands easily at 41c

and up. Supply better than 160c.

For every 100, or more according to the

value, 4-6c extra.

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THE HOUSEHOLD.

MRS. RED SQUIRREL.

MAHIAH DOUGLAS.

Mrs. Red Squirrel sat in the top of a tree; "I believe in the habit of saving," said she; "If it were not for that, in the cold winter weather, we'd have, and my young ones, I know, altogether; But I'm teaching my children to run and lay up Every acorn as soon as it drops from its cup, And to get out the corn from the shocks in the field, There's a nice hollow tree where I keep it concealed."

We have laid up some wheat and some barley and rye, And some very nice pumpkin seeds I have put by; Best of all, we have gathered in all that we can; Of beech-nuts and butternuts grown in the wood; For cold days and hard times winter surely will bring, And a habit of saving's an excellent thing.

"But my children (you know how young squirrels like play); We have plenty, great plenty, already; they'll say, 'We are tired of bringing in food for our store; Let us all have a frolic and gather no more!' But tell them it's pleasant when winter is round, If we feel both to use and to give we've enough; And they'll find the butternuts bloom in the spring. That a habit of saving's an excellent thing."

THE BURNT BUCKET.

"O, dear!" cried Naomi.

O, dear!" echoed Ruth, and two suddenly-made-nuisable little girls stood looking at each other. What could be the matter? Something pretty bad;—the new pine milk bucket was half burned up.

"What shall we do, N'omy?" asked Ruth of her sister who was older than she.

"We'll have to go right off and tell mammy."

Don't think this happened lately, or when pine buckets were plenty and money easy to get. It took place years ago, when Ohio, as a state, was barely in its teens.

Cousin Ezra Mead, just out from Vermont, was over at Uncle Daniel's, and Mammy had gone over there, to enjoy the rare treat of hearing all the news from the dear old home.

"Take care of things, girls; do your work first, and then play," had been her goodby to her little daughters, as she left them.

"Deed we will, Mammy," they answered heartily as they helped her off, with their little brother and the baby, glad because she was going to have a good time.

Not a cent either did they care for being left alone, and no wonder, for not often did they have time for such a play as the one they had in prospect that day.

Without waiting for the last possible glimpse of their mother through the trees, Naomi, taking the lead, said, "Now, Ruth, if you'll sweep I'll do the out-door work."

So she hurried off and drove the cow out of the calf-pen, without losing an instant in trying to decide which of Bossey's ears was the prettiest, the white or the red one. Next, she pounded up some corn and fed the goslings, without thinking once that time, how much their red feet looked like the morocco in the family shoe box, so carefully kept and sedulously worn.

Almost before Ruth's little arms had finished their task with the heavy splint broom, she was back saying,

"If you'll rub the platters, Ruth, I'll scour the milk bucket," and very soon the pewter plates, shining like new tin, stood on a shelf, and turned down on the hearth to dry was the bucket, scrubbed white as a bone.

When they had put two or three sticks of wood on the coals in the big fireplace, to keep the fire from going out, because if it did, there was not in the world, then, such a thing as a match to start another with, and they knew the trouble it was to borrow fire—why then what Mammy had meant by "their work" was done.

And then they were free to hurry out to their ready-made play houses at the foot of forest trees, between the thick, high roots that stood open and welcoming like the arms of easy chairs.

Right at hand, too, were their ready-made furnishings, moss for carpets, chips for shelves, acorn cups for dishes, and gourds for dolls. They gathered, and spread out, and put up, and arranged, and dressed, and took down, and re-arranged and re-dressed the dolls and oh, how good it did seem, and what a little while till they got hungry and went in for something to eat.

Then the brightness of their day vanished at the sight of a charred, smoking object on the hearth, in place of the neat, new bucket that they had placed there.

They had never thought the fire could blaze up and do such mischief. How wretched they were! Mammy must know, and though they could hardly endure to go and tell her, neither could they endure not to tell her.

They crossed the foot-log over the creek near Uncle Daniel's Ruth said, "N'omy, don't you 'most wish we'd fall off?"

"You sinful girl, don't you 'pose Mammy's got enough to feel bad over 'thought having us drowned'?" Naomi answered severely.

Along with Cousin Ezra Mammy met them at the horse block, for soon as she "spied them coming she was anxious.

"You careless girls," she said, as soon as they faltered out their bad news, "you deserve to be severely punished." "Molly," said Cousin Ezra gently, "don't be hasty, I believe these children have suffered enough already."

The mother was too just to be angry for more than a moment, but her day's pleasure was spoiled.

"Mammy," said the little girls on their way home, "don't you wish Daddy didn't have to know?" Their father, though an excellent man, was by stress of hardships becoming unreasonably irritable and severe in his family.

Poor Mammy, though sharing her children's wish, was slow to answer, "Children, I hate to have a secret from

your father, but I'm going to try and keep this from him awhile; he has so much to fret and discourage him. You must see what good children you can be, and how much you can do to help him."

It was the busy springtime, and as Daddy worked early and late, Mammy managed to milk the cow unobserved of him. Almost as many hours as the parents worked did the little girls toll, scaring the crows and squirrels from off the stumpy cornfield, "picking brush," which meant picking it up to burn, or wetting down the salt leach, or keeping up the fires under the great iron kettles where the lye was boiled down into black salts. That commodity made from the ashes of the huge log-heaps that Daddy burned as he cleared off his ground, was the only thing he had to sell that brought him a bit of money.

He was going off to Zanesville with some of it again as soon as the corn was knee high. The evening before he was to go, after the children were in bed, Mammy said, "Father, I've got something to tell you," for she could not bear to have a secret from him when he was going away, so then she told him all about the bucket. This seems now like a small thing to make such an ado over, but then comforts were few and hard to get. With money from the black salts he had bought a pine board forty miles away, and with the help of his hickory hoops made the bucket himself, by fire light.

He didn't say much at the close of her little story, but he must have thought some over it during his lonely, long drive.

A week later the big wagon was home again. Eager Naomi and Ruth climbed into it and with many questions helped Daddy unload.

"What's this, Daddy?" "Precious salt, girl, that must do us six months."

"What's this?" "Glass, for a window at last."

"And this?" "Tea for mother," and with a quiver in his mouth, and a tear in his eye, the little package went into her hand.

"And this, Daddy?" The board they lifted out looked so much like one they'd seen before that they dropped it, blushing guiltily.

"Hand it along," said Daddy; "I thought it was too bad my little girls were so afraid of their unkind father that they could not tell him about the old bucket, and so I got a board for another milk-bucket."

"O Daddy," they cried, "that wasn't all—we hated to have you feel bad!"

"Was that part of it?" said he. And then he lifted them down and for a great rarity gave each of them a kiss, adding, "we won't begrudge the loss of the bucket any longer if we only learn the lesson from it we may. While I must learn to be pleasant and just, you can learn to be careful and true, but mother here don't need to learn anything; she's perfect already!" And then for a very great rarity, she had a kiss, too!—Christian Advocate.

THE LAND OF ANYHOW.

Beyond the isle of What's-the-use, Where Slipshod Point is now, There used to be when I was young, The Land of anyhow.

Don't care was king of all this realm— A cruel king was he! For those who served him with good heart, He treated shamefully!

When boys and girls their task would shirk, And cloud poor mother's brow, He'd say: "Don't care! It's good enough! Just do it anyhow."

But when in after life, they longed To make proud fortune bow, He let them find that fate ne'er smiles On work done anyhow.

For he who would the harvest reap, Must learn to use the plow; And pitch his tents a long way From the Land of anyhow!

—R. W. Mason, in Little Men and Women.

"John Ploughman" on "The Sanguine Man."

One of the late Charles H. Spurgeon's most characteristic minor works was done under the heading, John Ploughman's Talk. Half a million copies of it have been sold. A new edition, which has just been put forth in paper cover and cheap form, ought to be widely circulated. The following citation on Hope is a good specimen of "John Ploughman's style:

"The sanguine man's hope pops up in a moment like jack-in-the-box; it works with a spring, and does not go by reason. Whenever this man looks out of the window he sees better times coming, and although it is nearly all in his own eye, and nowhere else, yet to see plum puddings in the moon is a far more cheerful habit than croaking at everything like a two-legged frog. This is the kind of brother to be on the road with on a pitch dark night, when it pours with rain, for he carries candles in his eyes and a fireside in his heart.

"Beware of being misled by him, and then you may safely keep his company. His fault is that he counts his chickens before they are hatched, and sells his herrings before they are in the net. All his sparrow's eggs are bound to turn into thrushes, at the least—if not partridges and pheasants. Summer has fully come, for he has seen one swallow. He is sure to make his fortune at his new store, for he had not opened the door five minutes before two of the neighbors crowded in; one of them wanting a loaf of bread on trust, and the other asking change for a shilling.

"He is certain that the squire means to give him his custom, for he saw him reading the name over the door as he rode past. He does not believe in slips between cups and lips, but makes certainties out of perhaps.

"Well, good soul, though he is a little soft at times, there is much in him to praise, and I like to think of one of his odd sayings:

"Never say die till you are dead, and then it's no use, so let it alone."

"Is not the fairest form that holds The mildest, purest soul within."

THE HOME CORNER.

FREE PATTERN.

By special arrangement with the BAZAAR FLOWERING PATTERN CO., we are able to supply our readers with the Bazaar Flowering Patterns at very low cost. It is acknowledged by every one that these patterns are the simplest, neatest and prettiest. Full directions accompany each pattern, and our lady readers have been invariably pleased with them in the past. The coupon below must accompany each order, otherwise the pattern will cost the full price.

MASS. PLOUGHMAN COUPON.

Out this out, all in your name, address, number and size of pattern desired, and mail it to THE HOME CORNER, MASS. PLOUGHMAN, BOSTON, MASS.

Name _____

Address _____

No. of Pattern _____

Size _____

Enclose ten cents to pay expenses.



No. 7428.—Ladies' Guimpe Waist.

The handsome wrap is the velvet wrap, and the shorter it is made the daintier it seems. One of the very newest styles is here shown in black velvet decorated with jeweled appliques and edged with fine plisse of mousseline of soie. The single stole end is a new feature that may be omitted if not desired, the cape being perfect without it, as shown in the small sketch. The yoke and collar are cut together, being shaped in six sections that fit the neck comfortably, and can either be joined to the top or left partly open, to form tabs through which the plaited mouseline falls with a soft, becoming effect. Each section should be interlined with canvas before joining. The cape or pelisse portion is shaped in circular outline and joined to the lower edge of yoke, the stole being joined to the right front section of yoke. A very handsome jeweled buckle decorates the front, the closing being invisible in center. Smart capes in this style are worn by both young and middle-aged ladies, the former preferring generally to omit the stole front. A handsome silk of satin brocade lining adds much to the attractiveness of this dainty top garment, which can also be developed satisfactorily in silk, satin or cloth, or of material to match the gown. Braid in different designs, passementerie, fringe, ruchings or moss trimming, will provide suitable decoration. To make this cape for a lady of medium size two and one-quarter yards of material twenty-four inches wide will be required. The pattern, 7339, is cut in three sizes, large, medium and small. With coupon, ten cents.

Poplin frocks are trimmed with a belt and roses on each side of No. 9 or No. 12 velvet ribbon; corselet on gray, green or beige, with turquoise on dark green.

Elderly ladies wear taffeta ribbon in black, black and white, purple, lavender, etc., as stock collars and a belt outlining a short, pointed basque. They are also wearing silk yokes covered with a trellis of narrow black satin or velvet ribbon.

All ages between children and the foregoing are using ribbon from three to four inches wide for plain stocks tied in a short bow or sailor's knot in front. Satin, taffeta and moire are all used for these collars in plain and striped designs in black, white, cerise, purple, emerald, scarlet, turquoise and pink.

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gathered to stand out from the top. The wrists are trimmed to match the epaulettes, neck and fronts. All kinds of summer material will develop stylishly by the mode, the variety of guimpe ornamentation

OUR HOMES.

LIFE'S HARMONY.

They tell me that in Pisa's old cathedral
All noises harsh and loud—
Gating of ponderous doors, shrill tones, the
Crashing.
And the murmur of the crowd—
Are caught up, softened, harmonized, and
Are blended.
Within the lofty dome,
There closed back in one great wave of music
That is a dream of home.
All the harsh notes in life's mingled music—
Is the burden and the woe,
The stroke that almost snaps the quivering
Heart-string.
The joys we receive us so—
The joys we never receive done of perfect
wisdom.
Pawer, and love, shall be
Gathered and blended in divinest marvel
Of matchless melody.

—M. L. Upton.

THE EXPERIENCES OF A SPY.

Ordeals He Passed Through.

INSTRUCTED BY GEN. GRANT AND CATE-
CHIZED BY GEN. KIRBY SMITH.

I was the first sergeant in Co. D. 7th Pennsylvania, in the spring of 1863. I was one of the thousands of soldiers under Grant and Sherman fighting our way northward toward Vicksburg. There were skirmishes and engagements every few days at that time. Gen. Pemberton was at Jackson, Miss., fifty miles east of Vicksburg, with a force of over 20,000, and was being daily reinforced. Grant and his army entered Grand Gulf May 26, 1863. Gen. Sherman was ordered with 12,000 men to make a demonstration against Haines Bluff to compel the confederates to detach troops from Pemberton's force.

Gen. Grant planned to face the two confederate armies in detail and defeat them before they could unite against him. He wished to know a lot of facts about the confederate fortifications in the gaps of the Red Rock ridge, and the size of Johnston's reinforcements. Spies were necessary, and at that time I was called upon to do spy service.

I had done a little spy work in the Part Gibson campaign, but this job in Johnston's camp, Col. Raymond told me, was about the most dangerous that any spy could undertake. The two great armies were almost ready to fight each other any day, and all the camps were unusually watchful of unknown civilians. Col. Raymond said he wanted twenty young men who had nerve, and who would go into the enemy's lines, ready to die, if necessary, without whimpering or divulging of secrets. He also informed me that several confederate spies had been recently caught at Corinth, and that the enemy would surely retaliate on federal spies.

I was given two hours to think the proposition over. I was left in a room and not allowed to speak to any of my comrades.

I confess I almost perspired blood as I sat there alone that lovely May morning, and thought over the horrible risk I was going to take. But I agreed to go.

Col. Raymond told me that Gen. Grant wished to talk with the men who were to go as spies. The colonel led us about half a mile away to a dilapidated house where Grant made his temporary headquarters. Gen. Grant left a table full of maps and drawings, and came to speak with us in the yard. He explained that we had been chosen because of our reputation for coolness, nerve and daring. He told us that if any of us had any hesitancy or doubt of our courage in engaging in the spy work in a region and at a time when we would be summarily hanged if caught, that one should decline the service then and there.

That afternoon each of us was instructed in the particular information he was to get, and the respective part he was to play as a civilian in the enemy's camp.

When I reached Gen. Johnston's main camp about Jackson, I knew that crucial tests would be made. I had by that time gained nearly all the information I wished for Gen. Grant, and my plans were how to get back to the federal lines.

I slept in a barn one night, remote from any camp, where I could have at least partial peace from the fear of soldiers watching to entrap me to my death. It was marvelous that I was not stark mad by that time. The next morning I was getting out of the barn I saw several infantry soldiers out foraging. My actions had roused their suspicions.

I wrote on my slate that I was a confederate spy named Freeman, on my way to Jackson to get new goods for selling to the boys in gray.

I started out from the Grand Gulf on the night of May 5. I knew that I would be suspected of being a spy, and that the least indication that my hearing was at all good would forfeit my life.

I was within the enemy's lines by noon the next day. I ate under a cowshed while the rain drizzled down.

In the afternoon I was going along a road near a hamlet known as Griggsby. I heard a troop of cavalry coming down the road behind me. I put on a blank expression and trudged along with my black satchel over my shoulder.

A lieutenant rode up to me and asked:

"Hello here! where are you going?" I had had time to prepare myself for this test. I started as if at the appearance of the horse under my eyes, and looked vacantly up at the cavalryman.

He repeated his question. In a second I had my pocket slate out, and handed it courteously to the officer. The others in the troop laughed and said:

"Oh, he's a d—n fool dummy."

The lieutenant wrote on my slate, "Who are you, and where are you going?"

I knew that I was Daniel Freeman, and that I was peddling for a living.

Several of the troops remarked that it was peddling to waste time on such a dumb mutton-head as I, for I'd be hopped away.

I saw a camp of fully 1,000 contended down in the valley. I knew that my presence would be reported at headquarters by the cavalrymen, and it would be folly to go past a camp if I

were really seeking trade. I was stopped by a sentinel about the camp. I wrote for him my name and business on my slate. He growled something about lunk-head dummies wandering about in war time, and catching me by the coat sleeve, led me to the officer of the guard. The sentinel explained that I was deaf and dumb, and went away.

The officer had evidently known that the role of dummy was not uncommon with up-to-date spies. "Stand over there a second till I finish this," said he to me in the most artful, off-hand, easy manner.

My knees did move slightly, and I almost stepped a foot.

But I caught myself while the cold chills chased up and down my spine at my almost forgetfulness, and I resolved not to risk my neck so easily again.

"Your hand is bloody," said he, turning carelessly to me. I stood like a post, looking vacantly at him.

Some of the cavalrymen I had seen on the road came in, and I knew from the expression on the officer of the guard's face that I was to be tested for my deafness. I stood indifferent to my environment, looking at a picture on the wall, while I knew that some test of my hearing was being prepared at my rear.

Suddenly one of the cavalrymen drew his sword and shouted: "G—d—n this Yankee! I've a good mind to put him to the wall right here!"

"Stab the—" cried another.

Fancy how you would feel to hear such words shouted in your ears by a great, burly and armed cavalry man in an enemy's camp. I can't describe my feelings, but I never blinked. I stood scrutinizing the print picture on the wall.

I knew that my every muscle and nerve was being watched by every one in the apartment. The least twitch or turn of the head would have betrayed me.

"He's about as dumb as they make 'em," said the officer of the guard, when it was seen how oblivious I was to all their tests of my hearing. "Isn't it strange that such a poor cuss should go paddling around the lines of warfare? He'll get over the Yank lines and it'll go hard with him some of these days."

I was dismissed. I went paddling about the camp, all the time keeping my eyes open for topographical and armament information.

Two days later I was seven miles farther in the enemy's country. I had met hundreds of confederate soldiers on the way, but the fact that I had passed an outlying camp all right was an indication that I was a genuine fool.

I got a mass of information and had hourly simple tests of my hearing, or rather my non-hearing, faculty.

I was almost on the verge of nervous prostration from the strain of ceaseless precaution I had to exercise, lest I reveal my hearing.

I was standing in the door of a shanty cook-house in a camp, and without a moment's warning down came about five gallons of cold water over my head and shoulders. I shuddered now when I think how near I came to cuffing the confederate soldiers who stood about to watch me.

Instead of saying a word I gurgled a lot of inharmonious sounds of fright, and looked the more like thing of wood.

In another camp I was squatting on the ground, mechanically showing my soaps and tobacco, and playing deaf to the thousand and one questions artfully put to me, when I saw by a soldier's eye that some test of my hearing was to be made.

At seven o'clock the next morning I was led to the cook tent and given a meal. My satchel was restored to me. A colonel came and shook me by the hand. He looked over my remaining soaps, etc., and bought a little. Then, turning to me he asked: "How much are these?" I believe my lower jaw did move. I was caught off my guard for a trice. But I never spoke, and tossed back a mangled heap by the side of the cook.

He wrote me a pass in the lines about Jackson, and just as he handed it to me he turned and said: "Let me see that again." My hand almost moved to obey such an agreeable gentleman, but instantly I folded the paper and started on my way out of camp knowing that I was watched covertly by scores of eyes.

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THE HORSE.

Care of Horses.

As the hot season approaches, too much stress cannot be laid on the importance of watering your horses often and always before feeding. Nothing is so refreshing to a fatigued horse as a drink of pure water, not excepting his feed. By far the largest proportion of the animal body is composed of water, and the system cannot be kept in a normal condition unless it is supplied very liberally with this fluid. This need of a liberal supply of pure water is no less great in disease than in health. Too often when a horse is a little "off his feed" his water supply is restricted adding to his misery. In any and every disease a horse will do better if allowed all the water he wants than if his supply is restricted. Do not mistake this statement. It does not mean that a horse should be allowed to drink a large quantity of water at any one time. He should be offered a small quantity every twenty or thirty minutes until he has all he wants. Then, if a pail of fresh water is kept constantly before him he will never take enough at one time to hurt.

In repose a horse should stand without pointing any of his feet. As soon as he begins to stand with one foot in advance of the opposite one he is unbalanced and sooner or later must go wrong. If cases of this kind are properly attended to at the first indications the trouble will soon be overcome; but if allowed to go on until the parts are diseased, the treatment becomes prolonged and less certain in its results. Ninety-nine out of every hundred cases of lameness in a horse are due to an unbalanced foot, the result of improper paring of the foot or a shoe not adapted to the foot or the work for which the horse is used.

While it is not possible to cure every case of lameness in a horse by shoeing, it is nevertheless true, that the proportion of curable cases is so large as to be considered almost universal. Horse owners and shoeing smiths are slow to believe that anything can be done by shoeing to improve a lame horse, if he is not lame in the foot. Nothing could be further from the truth than this belief, and it stands as a great stumbling stone to advancement in the art of shoeing horses. If every horseman and every horse owner really believed the truth, that any portion of the foot influences the entire limb, then we would have better shoeing and fewer lame horses. Great suffering is caused by the improper use of the whip, the torturing check rein, the curb bit, neglect in watering and feeding, and yet I believe that bad shoeing alone results in more misery among horses than all these causes combined. The one is visible and when a case is seen, there is a chance of its being reported and prevented, but innumerable horses, many of which have kind masters, are quietly and patiently suffering great torture.

In our professional duty we are often called to see a lame horse and learn that he has just been to the shoeing smiths, who has had the shoe off and says that there is nothing the matter with his feet. Upon taking him to the smith and adjusting the shoe to relieve the pressure on some portion of the foot or limb, immediate improvement is shown. Ringbone, for instance, comes, as all horsemen know, in three different positions. The outside, inside or front. Take horses with outside ringbone and you will find a peculiarity in the shape of the foot in every case. Horses with the inside ringbone will have another peculiarity in the shape of the foot, and those with the same trouble in front have still another peculiarity. Horses with spavin will have another peculiarity in the shape of the foot not found in sound horses, and so we might go on enumerating pathological conditions in the feet and limbs of horses, entirely due to a mistaken idea among our horse shoeers. But enough of this subject for the present from one in whose mind it is ever present.—Dr. J. H. Herster, V. S., in *Human Alliance*.

The owner that does not know enough to keep his team in good condition for work is being paid for his neglect by the losses that come in work poorly done, and lessened value of teams. Some men will lay the blame on the collar, the horse, or the work, when another man with the same team and harness will do more of the same kind of work, and the team thrive to the end of the season without a scar or sore. One man is thoughtful, the other is negligent and careless.—Exchange.

Treat your horse well and he will treat you well. Give him a Market Peat Moss. C. B. Barrett, 45 Market street, Boston, Mass.

The Weather Bureau's Weekly Crop Bulletin.
FOR WEEK ENDING MONDAY JULY 18, 1898

OFFICE OF THE
UNITED STATES WEATHER BUREAU,
BOSTON, MASS., JULY 19, 1898.

The crops are much improved in Rhode Island, Connecticut and Massachusetts, though more rain is needed. The drought continues in the northern states, though, as yet, crops are not seriously injured. Frosts on the 11th and 13th did considerable damage to potatoes, corn, beans and vines in the lowlands of the northern states.

MAINE.

Androscoggin.—Drought continues. Grain rusting badly. Haying well along; large cut. Large range in temperature.

Aroostook.—Rain needed; frosts 11th, 12th damaged buckwheat, beans and potatoes in lowlands; haying in full progress, big crop; potatoes good, little damage by beetles.

Cumberland.—The drought is getting severe; potatoes, small fruits and grass fields need rain; crops have generally made a fine growth.

Franklin.—Frost on the 12th damaged corn and beans; corn and gardens retarded by cold nights; hay half cut; drought becoming severe.

Hancock.—In need of rain; vegetables doing well; fine weather for haying; frost not troubled by worms as yet.

Kennebec.—Drought prevailing; in some sections vegetation is drying up; good crop of hay.

RIEHD ISLAND.

Bristol.—Rain has helped corn, potatoes, and crops generally; hay secured in excellent condition.

Kent.—Corn and potatoes in good condition; oats light; rye average; apples light and falling.

Newport.—Heavy rain of 13th has improved crops and conditions general, prospects promising.

Providence.—Rain has improved crops wonderfully, cranberries just in bloom, a week or ten days late.

Washington.—Rain very beneficial and crops generally looking well.

CONNECTICUT.

Fairfield.—Corn, potatoes, and tobacco growing finely; small fruits and vegetables plentiful.

Hartford.—Crops doing well but more rain needed.

Litchfield.—Rain has improved all vegetation.

Middlesex.—Early crops suffered badly, late crops good condition, present prospects good.

New Haven.—Crops generally very promising, corn backward; apples light; peaches near average.

New London.—Corn doing well; rye being harvested; second crop of clover starting well.

Tolland.—Crops much improved; corn and potatoes doing finely; heavy crop about secured.

Windham.—Oats, rye and hay generally harvested, grain fair crop, hay heavy.

J. W. SMITH,
Section Director, Boston, Mass.

Reclaiming Marsh Lands.

Marsh lands vary greatly in their character, and, consequently, in the best methods of their treatment, says a report of the Wisconsin Experiment Station. In a general way it must be said all such lands, before they can become suitable for general agricultural purposes, must be drained, and sooner or later, tile drained. The draining is always to be recommended, rather than draining by open ditches. If the peat is well decomposed, and not more than eighteen inches thick, the best method of treatment is to tile drain at once, but if the peat is not well decomposed—that is, if it is coarse and fibrous, and brown in color, having a thickness of more than eighteen inches, then usually in such cases, open ditches should first be resorted to. The necessity for open ditches in such case grows out of the fact that undecomposed peat when drained shrinks very greatly and settles so that the surface may fall ten to twenty inches during the process of drying. If the tiles are laid in such lands at once, the danger is that they will be found too near the surface for effective work when the land has been dried.

Stratford.—Good for haying but growing crops are in need of rain.

Sullivan.—Corn, potatoes and small fruit suffering for rain; spring grain saved in good condition.

VERMONT.

Addison.—Potatoes rusting badly in some sections; corn below average; having been washed.

Bennington.—Dry weather rolling corn and damaging potatoes; high pastures brown.

Caledonia.—Crops beginning to suffer for rain; frost 12th, damaged corn, potatoes and vines slightly.

Grand Isle.—Pastures getting short and stock water scarce; apples less than half crop, still falling.

Orleans.—Potatoes, corn and vines considered, in places, seriously damaged by frost on 12th; very dry.

Rutland.—All crops need rain, corn and potatoes suffering; unusually large crop of hay half secured.

Washington.—Frost on 12th damaged vegetables in places; general need of rain, though little damage yet.

Windham.—More rain needed though crops in fair condition; apples improved; good haying.

Windsor.—Crops in fair condition but beginning to need rain; large crop of fine quality hay.

MASSACHUSETTS.

Barnstable.—Crops improved by rains; overflowed cranberry bogs good; apples poor; haying about done.

Berkshire.—Potatoes, corn and oats good; apples dropping; little damage by frost.

Bristol.—Showers have improved crops; prospects for about all crops good.

Dukes.—All vegetables were improved by rain.

Essex.—Crops good; haying three-fourths finished, very heavy crop; apples dropping.

Franklin.—Generally promising crops; potatoes and apples indicate a large yield.

Hampden.—More rain needed soon; haying soon finished; berries plenty; chestnuts bloom late.

Hampshire.—Garden truck, pastures, and early potatoes need rain; second crop grass short.

Middlesex.—Rain helped all crops; potatoes above average; apples plentiful in many orchards.

Nantucket.—All crops doing well; cabbage planted.

Norfolk.—Rains have improved crops and grass.

Plymouth.—Cranberries damaged by dry weather; apple crop light.

Suffolk.—Lawns and plants much improved by the recent rains.

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ANDROSCOGGIN.

Androscoggin, Livermore Falls, Aug. 30 Sept. 1

Androscoggin Valley, Canton, Sept. 27, 29

Brownfield, C. C., Brid-

Buxton, Buxton, " "

Cumberland, Gorham, "

Eastland, Framingham, " "

Franklin, Oxford, " "

Greenland, Newmarket, " "

Hanover, Newmarket, " "